ADEM

ALABAMA HAZARDOUS WASTES MANAGEMENT AND MINIMIZATION ACT (AHWMMA)

Compliance Evaluation Inspection (CEI) Report

1) Author of Report

L. J. Knickerbocker
Environmental Scientist, Senior
Compliance and Enforcement, Industrial Hazardous Waste Branch
Alabama Department of Environmental Management (ADEM)
1400 Coliseum Boulevard
Montgomery, AL 36110

2) Facility Information

Hyundai Power Transformers USA, Inc.
215 Folmar Parkway
Montgomery, Montgomery County, Alabama 36105

EPA ID Number: ALR000050989
NAICS Code: 335311
Telephone: (334) 481-2071

3) Responsible Official

Mr. Ronald Martin, Safety Supervisor
Email: [HYPERLINK "mailto:R.Martin@hhiamerica.com"]
Website: [HYPERLINK "http://www.hhiamerica.com/"]

Telephone: (334) 481-2076

4) Inspection Participants

Mr. Martin
Mr. Tony Wojciechowski, Senior Manager of Human Resources
Ms. Paula Whiting, Environmental Engineer
US Environmental Protection Agency - Region 4
Ms. L. J. Knickerbocker

5) Date of Inspection

March 24, 2016

6) Applicable Regulations

ADEM Administrative Code Division 335-14, Hazardous Waste Program Regulations.

7) Purpose of Inspection

The purpose of the inspection was to determine the facility's compliance with all applicable requirements

of Division 14 of the ADEM Administrative Code.

8) Facility Description

Hyundai Power Transformers USA, Inc. (hereinafter "HPT"), a subsidiary company of Hyundai Heavy Industries, Co., LTD, manufactures electrical power transformers for the power generation and transfer industry. The production facility occupies approximately 319,000 square feet and has been in operation since 2012. The facility operates two 10-hour shifts, Monday through Friday and every other Saturday. HPT employs 315 people; seven employees manage hazardous waste during the performance of their job duties.

In its most recent notification of regulated waste activity (ADEM Form 8700-12, dated July 20, 2015) HPT identified itself as a small quantity generator of ignitable (D001) hazardous waste, a small quantity handler of universal waste, and a used oil generator. Processes that generate hazardous waste were identified as painting operations, transformer testing, and machine maintenance.

Observations

On March 24, 2016, Ms. Whiting and I (hereinafter "we" or "us") arrived at the site at 9:40 a.m. and proceeded to the lobby area, where we were met by Mr. Martin and Mr. Wojciechowski. We introduced ourselves and explained the purpose of the inspection, then we proceeded to a conference room where we held the opening meeting and the facility representatives provided background information about HPT and an overview of its operations. In addition to the transformer assembly plant, HPT has a fabrication shop that manufactures all the fittings for the coolant systems and a paint shop where the assembled transformers are coated to control corrosion. Some aerosol spray paints are used. Thinners and solvents include toluene and/or acetone. Used oil is generated through equipment maintenance. Spent fluorescent lamps are managed as universal waste. Paint and solvent waste is the main hazardous waste stream.

In the course of guiding us on a brief walk-through of the assembly area, the facility representatives explained the production process:

> Bundles of thin wire are twisted together to form a thick cable, known as a "winding"; the "core" or carcass of the transformer is constructed from carefully fitted sections of wood; a coolant system, called the "plumbing", is fitted to the core so that oil can flow throughout the unit and dissipate heat; and then the windings are coiled around the core. During the coiling process, each winding must be wrapped with paper to insulate it from the adjacent windings, the plumbing, and the core to prevent short circuits; cardboard is also wrapped around the core between each layer of the windings to further insulate the unit. An outer casing is added to protect the entire assembly from damage.
>
> The plumbing of the assembled transformer is filled with coolant oil, then the unit is tested to ensure it meets specification. Once it passes, the oil is drained and stored for continued use, and the transformer is placed in a drying oven to drive off any remaining oil or moisture.
>
> Once dry, the plumbing lines are filled with dry air and capped. The transformer is disassembled for shipment and reassembled upon arrival.

Following the introductory tour, Ms. Whiting conducted the visual site inspection while I conducted the records/documents review. An aerial view of the facility is included as Photograph #1.

During the visual site inspection, Ms. Whiting noted the following:

Used Oil Tanks

The oil used during the transformer testing phase can be reused multiple times, but it eventually breaks down and is no longer suitable for use. At that point, it is pumped into Tank #8, which has 2,600-gallon

capacity. The used oil is stored until it is collected by either Safety Kleen (EPA ID Number TXR000081205), which is based in Richardson (Dallas County), Texas or Buck Oil (EPA ID Number ALR000009571) in Montgomery, Alabama. See Photograph #2.

Paint Shop

In this area, any portions of the transformer that will be exposed to the elements are coated to control corrosion. Most of the painting is done using a compressed air sprayer inside a paint booth; the paint pot is equipped with a removable liner. Once empty, the liner with the remaining paint (called a "puck") is placed in a solvent distillation unit. Recovered solvents are used to clean the paint guns. The bottoms from the distillation unit are managed as a hazardous waste; the empty liners as well as the paint filters are managed as solid waste. Aerosol spray paint is used to touch up small areas. According to the fabrication manager, spent aerosol cans are punctured, but no effort is made to capture or contain the liquid or propellants.

One 55-gallon open-top satellite accumulation container containing paint pucks was not marked in any way. In addition, its lid was in place but was not secured by a drum ring. This container was closed properly prior to our departure from the site. Two non-empty aerosol paint cans were discovered in the solid waste trash. See Photograph #3 through Photograph #6.

Fabrication Shop

In this area, the protective cover and all the fittings for each transformer's plumbing system are fabricated. The finished parts are sent to the Paint Shop for coating, then moved to the assembly building for installation.

No issues were noted in this area.

Maintenance Shop

This area is dedicated to on-site maintenance activities. Universal waste (UW) lamps and used oil generated during maintenance activities are stored here as well.

At the time of the inspection, there was one uncontained, unmarked two-foot long fluorescent lamp was found in the area designated for UW and electronic waste storage. The waste lamp was immediately placed in a marked and dated corrugated cardboard box.

Behind the Maintenance Shop, there were four totes of used oil staged on the concrete driveway. None was marked with the words "Used Oil". One of the totes had a lidded pouring funnel screwed into the bung, but there was no latching mechanism on the funnel. Consequently, this tote was open.

See Photograph #7 through Photograph #9.

Records Review

During the records review, we requested the following documents and records:

- Hazardous waste determinations
- Waste profiles for all waste disposed in Alabama
- Documentation of the quantity of hazardous waste generated each month
- Hazardous waste manifests
- Land disposal restriction (LDR) notices
- Weekly hazardous waste storage area inspection logs
- Written description of the training program
- Documentation of initial training
- Documentation of arrangements with police, fire, and emergency responders

- Notice to local hospitals

The review of relevant records and documents revealed the following information:

- All hazardous waste manifests were available and well organized; they indicate that HPT generates and ships off-site an average of three 55-gallon drums of paint waste each month. According to Mr. Martin, the drums are seldom full. The manifests all include EPA hazardous waste numbers D001 (ignitable), D005 (barium), D006 (cadmium), D018 (benzene), and F003 and F005 (non-halogenated solvents); LDR notices are kept with the manifests. HPT did not have a copy of the Designated Facility to Generator Copy (3-signature copy) of Manifest #00426741SKS, dated August 6, 2015; this copy of the manifest was obtained from the designated facility before we left the site.
- HPT's most recent 8700-12 indicated that its hazardous waste only carried the ignitability characteristic (D001).HBT could not provide copies of the universal waste manifests for the shipments sent in August 2014 and January 2015. Maintenance personnel explained that the facility purchases the universal waste boxes already labeled. Once the boxes are filled, the facility has to place their return address on the box and ship it back to Veolia North America (Veolia). Mr. Martin contacted Veolia to obtain a copy of the manifest and was told that Veolia had no record of receiving their shipment. When asked why, Veolia stated that the facility did not put their return address on the box, so that Veolia was unable to track the shipment. We recommended that HBT keep copies of all shipping documents for universal waste shipments in order to track their proper disposal.
- The site's written hazardous waste minimization plan was extensive.
- HPT has made hazardous waste determinations on all solid wastes generated at the site.
- The hazardous waste determination for the spent paint filters originally identified them as hazardous waste. *Following the inspection, HPT personnel had the filters retested; analytical results dated April 18, 2016 indicated that the filters are nonhazardous.*
- HPT has not provided any form of hazardous waste or emergency response training to its workers that manage or handle hazardous waste.
- HPT has not conducted or documented weekly hazardous waste inspections. Mr. Martin stated that they do not have a hazardous waste storage area and that all wastes are kept in satellite accumulation areas until they are collected.

Summary

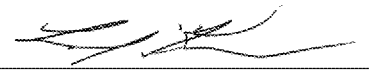
Based on observations made at the time of the inspection, HPT appears to be a small quantity generator, small quantity universal waste handler, and a used oil generator. The following possible noncompliant items were noted at the time of the inspection:

- HPT's most recent 8700-12 did not include all of the EPA hazardous waste numbers for the wastes generated at the site; it only included D001.
- HPT had not provided hazardous waste management training to its employees that handle hazardous waste.
- One hazardous waste manifest lacked the signed, Designated Facility to Generator Copy.
- One satellite accumulation container of paint and solvent waste in the paint area was not marked or labeled in any way.
- HPT did not make a hazardous waste determination of two aerosol spray paint cans that had been disposed in the solid waste trash. Both still held product.

- According to the fabrication manager, aerosol spray cans are punctured, but no attempt is made to capture the liquids or propellants.
- One spent UW fluorescent lamp was not marked, dated, or stored in a container.
- One tank holding used oil (UO) was not marked with the words "Used Oil".
- One tote of UO was not closed.
- Four totes of UO were not marked with the words "Used Oil".

Following the inspection, we met with Mr. Martin and Mr. Wojciechowski for a closing meeting. We reviewed our observations, and gave them the opportunity to ask questions. At the conclusion of the closing conference, I prepared a *Preliminary Inspection Report* describing our findings. I left the top copy of the form with Mr. Martin and we departed the site at 3:00 p.m.

9) Signed



Compliance and Enforcement Section
Industrial Hazardous Waste Branch
Land Division

June 07, 2016
Date

10) Concurrence

Clethes Stallworth, Chief
Compliance and Enforcement Section
Industrial Hazardous Waste Branch
Land Division

June 21, 2016
Date

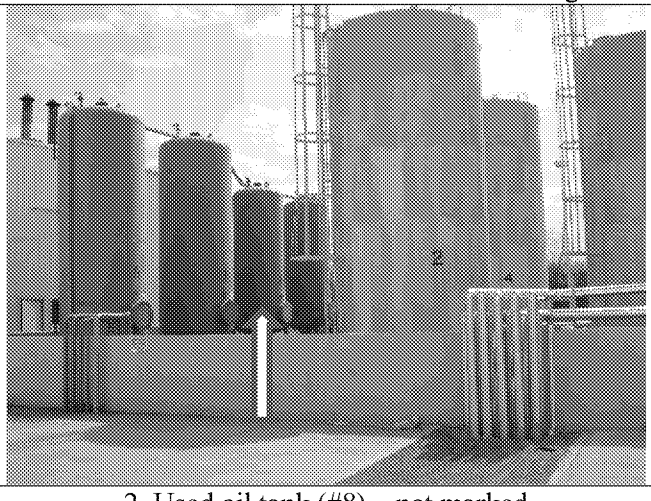
Attachment - Photo Log

39984 ALR000050989 101 20160621 HWTM CEI Report

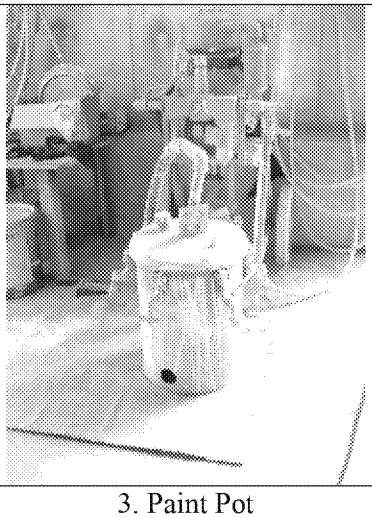
ADEM

ATTACHMENT – HYUNDAI POWER TRANSFORMERS PHOTO LOG

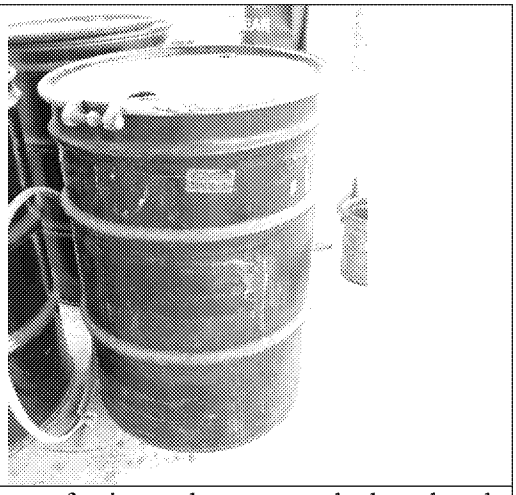
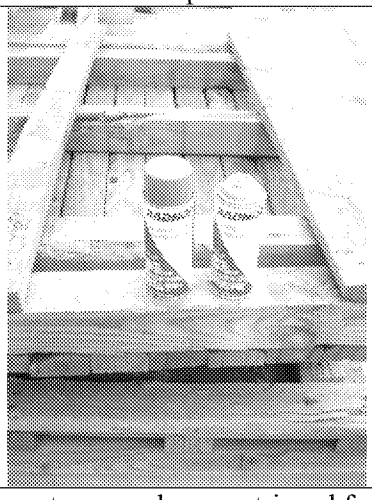
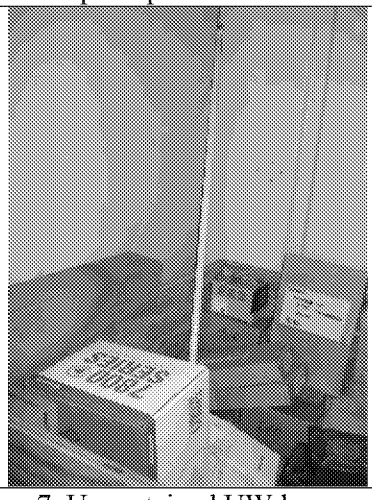
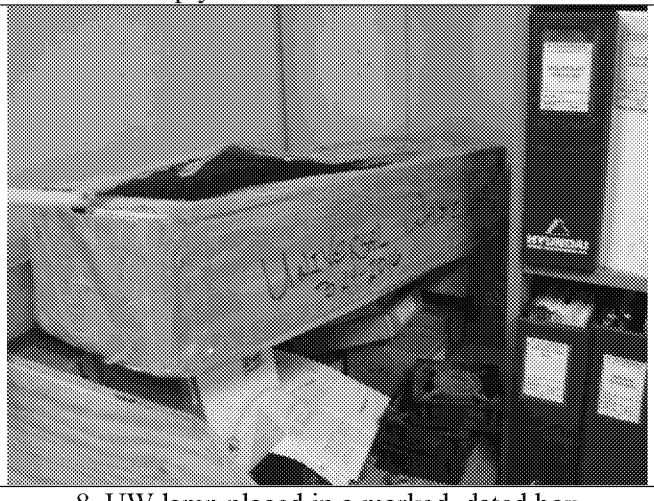
1. Google Earth view of site



2. Used oil tank (#8) – not marked



3. Paint Pot

	
4. Paint pot liner	5. SAA drum of paint pucks – not marked or closed
	
6. Non-empty aerosol cans retrieved from trash	7. Uncontained UW lamp
	
8. UW lamp placed in a marked, dated box	9. Used oil totes – not marked, one not closed